

- **Oversight.** The QAO, under the supervision of the QAM, is responsible for ensuring that the QA policy is uniformly applied by Section staff in the generation and assessment of environmental data. The QAO reviews quality assurance project plans (QAPPs) and sampling plans; assists project managers in the development of data quality objectives (DQOs); develops and maintains Section SOPs for field and laboratory work; performs data reviews, audits, verifications and validations; and conducts laboratory and field audits. The QAO serves as a liaison between the Section and EPA, Division Management and Department Management on matters pertinent to QA policy and procedures.
- **Implementation (Manuals/References).** The NC Superfund Section Quality Assurance Standard Operating Procedures Manual (QASOP) includes the U.S. Environmental Protection Agency, Region 4 Environmental Investigations Standard Operating Procedures and Quality Assurance Manual, November 2001, adopted by reference. Other, more detailed and Section specific standard operating procedures (SOPs) pertinent to laboratory, sampling and field operations have been incorporated into the QASOP. These Section specific SOPs are developed and maintained by the QAO, using such guidance as that found in EPA QA/G-6: Guidance for the Preparation of Standard Operating Procedures (SOPs), April 2007 (<http://www.epa.gov/QUALITY/qs-docs/g6-final.pdf>). These Section QA related SOPs cover laboratory activities; decontamination of equipment; sampling training; sampling activities; sample shipment; maintenance of sample custody; field documentation, e.g. log books, photographs, and photographic logs; QA audits (described below in more detail); and other procedures that pertain to the collection of analytical data that can be documented as meeting the DQOs appropriate for a given study. A copy of internal SOPs are made available to employees via the internet at [http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=8d450e40-1ff1-481f-9dcd-40ac5a-4d5bc3&groupId=38361](http://portal.ncdenr.org/c/document_library/get_file?uuid=8d450e40-1ff1-481f-9dcd-40ac5a-4d5bc3&groupId=38361).
- **Assessment.** Assessment activities are used to verify that measurement systems are operating properly and that the data generated by these systems are appropriate for their intended use.
  - **Data Quality Audits (Data Verification/Validation).** The EPA Region 4 Science and Ecosystem Support Division (SESD) performs data validation on analytical data generated for the Section by the Contract Laboratory Program (CLP). Project managers are responsible for performing data verification on all site-specific studies. The QAO is responsible for performing analytical data verification on routine equipment rinse checks or other QA/QC samples not associated with a specific site investigation. The QAO is also available to perform data quality verifications, validations, and audits in cooperation with the project managers for site studies at the request of management. Records of all data quality audits will be maintained and reviewed by the QAO for any trends which would suggest corrective action is required. Where appropriate, the QAO will make recommendations to Section management in this regard.
  - **Performance Audits.** Performance audits are quantitative evaluations of the ability of a system to produce appropriate, accurate and reliable data. Performance audits involve submission of blind split and duplicate samples to laboratories generating data for the Section. The Section utilizes analytical data from two main sources, CLP laboratories and the N. C. State Public Health Laboratory (Public Health Laboratory) in the Division of Laboratory Services, Department of Health and Human Services. The Public Health Laboratory has been granted primacy under the federal Safe Drinking Water Act (42 U.S.C. Sec. 300f, et seq). The North Carolina counterpart of the federal Safe Drinking Water Act is N.C.G.S. 130A-311, et seq. The EPA Region 4 SESD routinely conducts performance audits on CLP laboratories. The Public Health Laboratory is reviewed annually by EPA Region 4 SESD and participates in periodic proficiency testing by analyzing standards and unknowns distributed by EPA. Annual reviews by SESD cover the laboratory's QA/QC Program, sample preparation and handling, methodology, SOPs, record keeping, personnel qualifications, and instrumentation pertinent to water, solid waste, and hazardous waste analysis.
  - **Systems Audits.** Systems audits are on-site, qualitative assessments of an organization's facilities, equipment, personnel, procedures and quality processes. Field Audits verify that sample collection procedures are conducted according to SOPs and QA policies. These audits